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[For information on the topography, climate, agriculture and commercial crops, irrigation, stock raising, natural resources, production and supply, waterways, railways and roads of the valleys of the Tigris and Euphrates between the plateau of Asia Minor and the Persian Gulf discussed as one geographical unit rather than by political boundary, see M1 Middle East, Cat. 116, 21: Fisher, pp. 340-370.]

[For information on the topography, occupations and relative productivity of the desert plateau, and of the Arabian Peninsula as a whole, see M1 Middle East, cat. 116, 21: Fisher, pp. 427-449.]

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

2. COUNTRY AND PEOPLE

133 311 241 361

The zones of land surface into which the territory divides itself, though they belong less to history than to geography, may be briefly mentioned since they deeply affect the life of the inhabitants and reflect their ethnology.

First comes the mountain belt in the north and north-east. A part of the main Armenian and Zagros system, it formed in 1900 the sanjaq of Sulaymaniya and a large part of those of Mosul and Shahrizur. This terrain is wholly un-Arabian, the population solidly Kurdish. Its mountains, mainly barren but carrying also areas of forest, are divided by deep valleys sometimes widening into plains. The hardy inhabitants of its hundreds of villages produce crops of grain, rice, vegetables, fruit, and tobacco, grown on the water of springs and rivulets and the relatively abundant rain. The climate is equable in summer, harsh in winter, the landscape commonly of striking beauty.

In the flattish submontane area of Mosul and Shahrizur sanjaqs lie treeless uplands and the lower courses of the Greater and Lesser Zabs. Here, in ancient Assyria, village-dwelling cultivators grow spring grain crops on rain and, in places, by water-lift from the rivers. The country is intermediate in environment and race between the mountain zone and the hot flatlands of central 'Iraq. The latter, the most extensive and most characteristic region of the country, covered the sanjaqs of Baghdad and Karbalā and most of Ḥilla. Everywhere dead flat and stoneless, it is unblessed, save in rare seasons, by rainfall sufficient for crop-growing, and must needs be cultivated by lift or flow from controlled canals or flood-channels. The crops are winter and summer grain and vegetables, locally some rice, and vast gardens of dates. The population, entirely Arab, lives in mud-built villages or in clusters of hair tents or reed huts.

The equally flat silt-country of the lower Tigris–Euphrates delta, astride and below the prehistoric coast-line, covered the southern part of the Ḥilla sanjaq and almost the whole of the three sanjaqs of 'Amara, Muntafiq, and Baṣra. It was characterized by a higher proportion of reed dwellings, fewer mud villages: by lesser crops of wheat and barley, but extensive rice-growing in the flooded areas: by miles of date gardens, and by a special way of life developed by the buffalo breeders, mat weavers, and fishermen in the great marshes.

Ignoring the Arabian dependencies of Baṣra, two other zones remain to be mentioned. One is that of the Shaṭṭ al-'Arab in the Baṣra sanjaq, with its miles of ordered date gardens in a lean strip between river and desert: the other is that of the arid steppe

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

country, often too rainless to produce even the minimum of grazing. It lies, equal in area to the rest of 'Iraq, in the Shamiya desert south-west and west of Euphrates, in the upper Jazira, east of Tigris below Baghdad, and above it astride the Jabal Ḥamrin. These wastes belonged to the true camel-breeding Arab nomads; their inlying fringes, near to the rivers, were the home of the half-settled shepherd sections of cultivating tribes.

The inhabitants of all these regions varied widely in the nearness of their approach to urban civilization and the reach of government. Nearest came the citizens of the towns: then the settled village-dwellers, then the tribal cultivators in their clusters of dwellings, then the marshmen, the half-settled shepherds on the desert fringe, and finally the pure bedouin. These last were and are by far the least numerous element; to regard 'Iraq as largely a bedouin territory is a common error, since much of the country has always afforded the possibility of settled life, and bedouin are found only where no other form of life is possible.

Of the population of the three wilayas, no reliable estimate could be given then or later. The census in Turkish times was conducted, with feeble and venal inefficiency, only in towns and only for conscription purposes. The figures supplied by tribesmen or urban community heads varied with their fears or hopes of liability or benefit. The wilaya of Baṣra in 1900, excluding its Arabian areas, may have contained half a million souls; that of Baghdad perhaps a million and a quarter, that of Mosul less than half a million. A total of midway between two and two and a half million people may fairly be estimated.

The races of which the population consisted, and by each of which some contribution was made, were various. Arabs formed the great majority. But who were these? The folk even of earliest Arabia were of mixed physical types, and it is as idle to look for 'racial purity' in their later offshoots as in other races of the modern world. The Arabs of 'Iraq, in 1900 as today, were Arabic-speaking "Iraqis': a unified amalgam containing physical elements of every population who, from prehistory, had entered the river valleys as invaders or immigrants, and had been assimilated to form that 'Iraqi community which Arabs of Arabia had subjugated in the seventh century A.D. and, by vigour of their arms and faith, had turned into 'Arabs' like themselves. The 'Iraqi people by the end of the nineteenth century were oblivious of—would have denied—any other cultural or ethnic associations.

Within their community the shared tradition and pride of race far outweighed, in most relationships, the differences created by variety of environment, dialect, and material interest: yet these, too, could be formidable as between town and tribe, and as between

NORTHERN 'IRAQ AND ITS PEOPLES

By MAJOR W. C. F. WILSON, O.B.E.

A lecture given before the Society on March 10, 1937, Brigadier-General Sir Percy Sykes, K.C.I.E., in the Chair.

The CHAIRMAN: Ladies and Gentlemen,—I have much pleasure in introducing Major Wilson, who is going to speak to us on the subject of Northern 'Iraq and its peoples. He first served in 'Iraq under that very great officer, Sir Percy Cox, who recently passed away. Major Wilson rebuilt Kut after our victory over the Turks, and of recent years he has been administrative officer at Mosul; and can give us very up-to-date accounts of the Assyrian problem in Northern 'Iraq, and can also speak from first-hand knowledge of the Kurds and the other minorities of the country.

TOO many who have never been to 'Iraq, the name, or its old alternative, Mesopotamia, possibly conjures up visions of flat, featureless plains, strips of cultivation along the banks of the two great rivers, Tigris and Euphrates, sandstorms and a torrid climate. Such visions are in a fair measure true of central and southern 'Iraq, but are very far from applying to the two northern provinces of Arbil and Mosul.

Geography

From the Lesser Zab river northwards the country is undulating and intersected with watercourses or wādis, which after rain flow down to the Tigris and its half-dozen tributaries. This type of country extends right up to the foothills which fringe the mighty mountain mass of Kurdistan. Over this area, irrigation, except on the rivers for summer crops, is unnecessary, and the rainfall which comes between November and May is in most years sufficient for the cultivation of large crops of wheat and barley. In the spring, grazing for animals is plentiful and a wonderful assortment of wild flowers appear.

In the mountains, during the same period, heavy rain and snow fill the underground sources and provide water for the summer growing of rice, tobacco and other crops, and for good summer grazing for animals. These mountains contain several ranges 6,000 to 8,000 feet high and one peak near the Iranian frontier over 10,000 feet.

Population

The inhabitants of the two provinces consist of an extraordinarily heterogeneous collection of creeds and races with all the problems produced by such a collection.

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

MAP I

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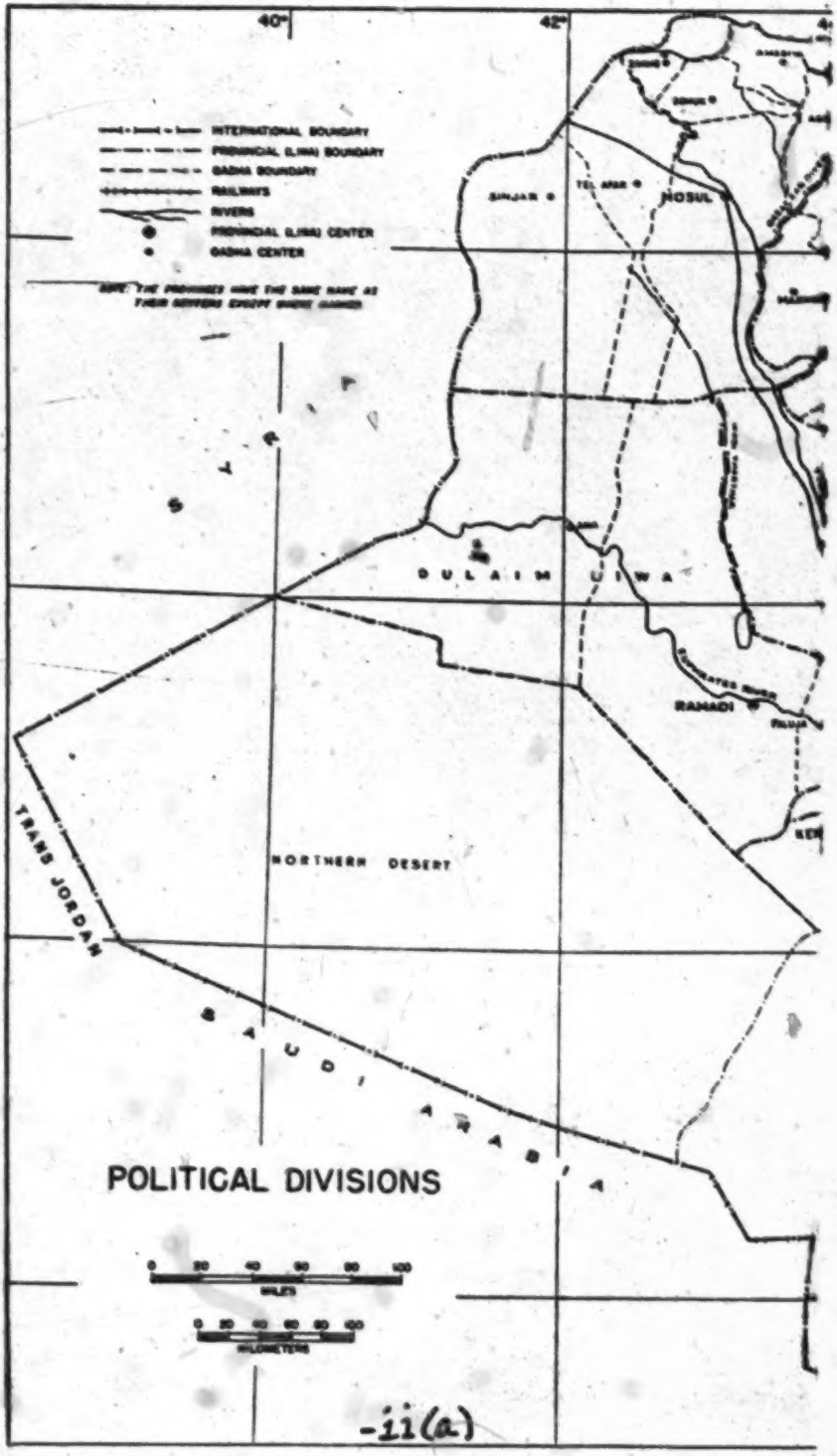

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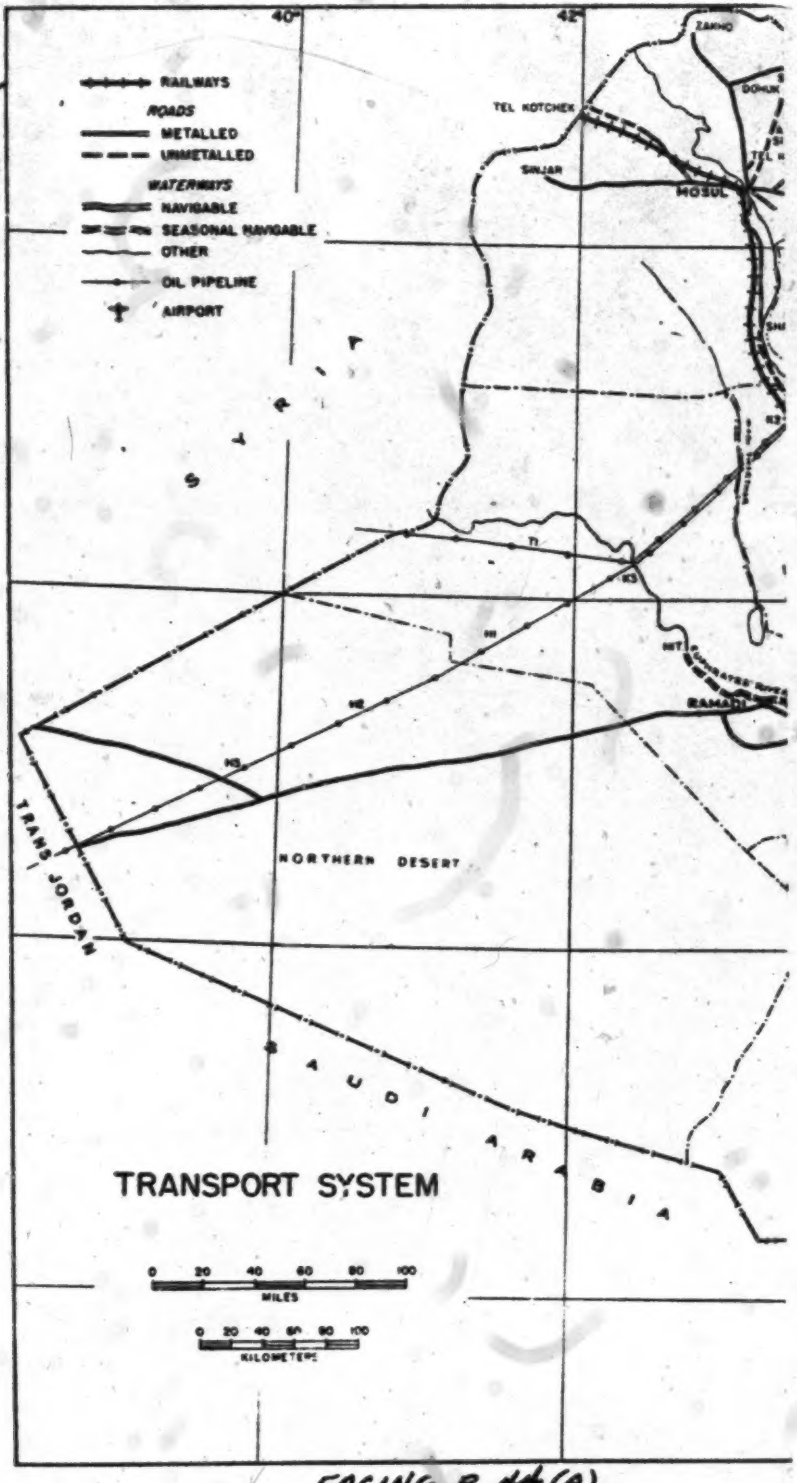

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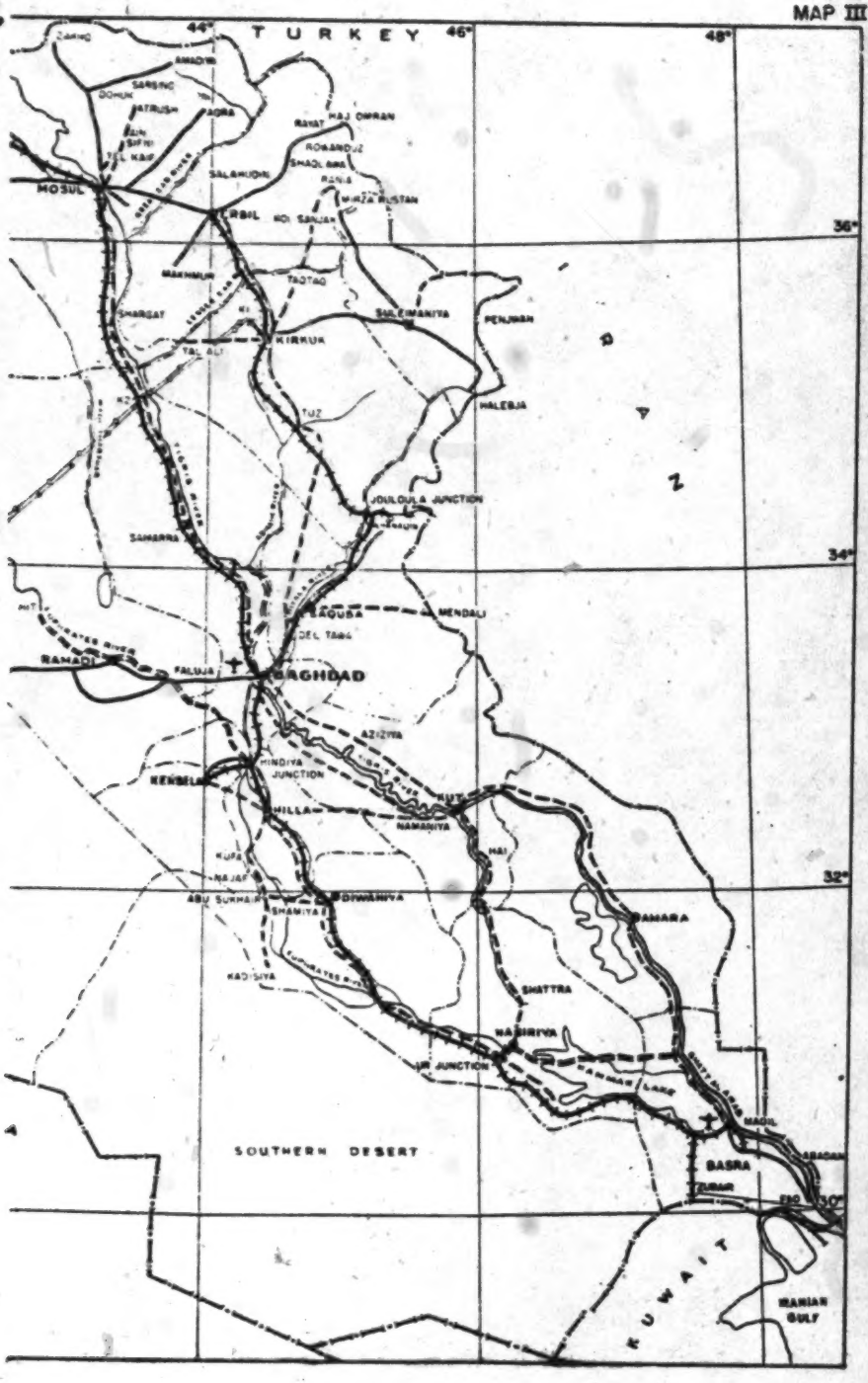
MAP III



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ANNEX A

BASIC FACTORS AND CONDITIONS

I. The Regions

131 Iraq, a country with a population of approximately 5,000,000 and an area of 168,040 square miles, forms roughly a triangular area with the base running southwest to northeast and the apex 133 terminating at the Persian Gulf. It is dominated by two great river systems—the Tigris and the Euphrates. The Euphrates rises in the mountains of Turkey, flows across the Northern Syrian plateau and then meanders through Iraq, receiving little additional water from tributaries. The Tigris also rises in Turkey, but further to the east and north. It enters Iraq in Mosul province and receives important accessions from the Greater and Lesser Zab Rivers which are fed from the snows and the rains of the mountains along the Turkish and Iranian borders and, to a lesser degree, from the Diyala River. Downstream from Ramadi on the Euphrates and Baghdad on the Tigris the two rivers form a single low-lying alluvial valley built up as a delta into the Persian Gulf. As they flow south, the rivers are virtually lost in the marshes and lakes of southern Iraq, their remaining waters uniting at Qurna to flow as the Shatt al Arab into the Persian Gulf.

311 Only a relatively narrow belt, lying north-northeast of a line roughly running south of Mosul and Kirkuk to Khanaqin near the Iranian border, has sufficient rainfall to permit the cultivation of winter crops without irrigation. In the rest of the country, agriculture depends upon the water of the two rivers for irrigation, whether by pump, by flow or by natural inundation. With the exception of the large and remote southern and northern deserts and the greater part of the rolling uplands between the Tigris and the Euphrates known as the northern Jezireh, most of this region can be cultivated once water is made available. With storage and regulation of the river waters, a great extension of the area under cultivation is possible. Without regulation, on the other hand, the

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

311 waters of the twin rivers are largely wasted and periodically unloosen disastrous floods upon Baghdad and the alluvial plain to the south.

The Rain-fed Zone

241 438 In the upland plains of the rain-fed zone stretching from Northern Mosul to Suleimaniya, wheat and barley are the principal crops. Rainfall is generally inadequate for summer crops, although water from streams and springs permit cultivation of rice and cotton. In part of this area, especially Northern Mosul, there has been a rapid extension of cultivation with the help of modern agricultural machinery.

233 438 241 To the north and northeast lie the mountain massifs of Iraq. Here the raising of cattle, sheep and goats by Kurdish nomads is one of the principal occupations. The mountains are largely barren of trees but offer natural pasture for animals. In the valleys and on hillsides grain, tobacco, timber and fruit are grown. Tobacco, although small in area, is an important cash crop.

438 433 [315] Except for some handicrafts, there is little native industry in this region. Mosul, the second largest city in Iraq, is principally a commercial center and an outlet for exports to Syria and Lebanon. Kirkuk, however, is the center of most of Iraq's petroleum production and one of the largest and richest oil fields in the world. Oil fields of subsidiary importance also exist at Ain Zaleh in Mosul province and near Khanaqin in Diyala province. The mountains of the North may ultimately yield other minerals such as copper, chrome and iron.

The Irrigation Zone

933 311 South of the rain-fed zone the river valleys may be divided into three major regions: the upper river valleys; the lower river valley down to Amara and Nasiriya; and the triangular area from Nasiriya and Amara to the mouth of the Shatt al Arab.

The first of these regions includes most of the northern Jezireh and the area north of Baghdad and east of the Tigris. The latter area still awaits irrigation for the most part, and the Jezireh is hardly susceptible to irrigation because of the elevation and configuration of the land. The Jezireh is an upland plateau

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

relieved by low ranges and depressed areas of which the major one is the Wadi Tharthar. It is sparsely inhabited by pastoral nomads although in the North some settled farming, made speculative by irregular rainfall, is carried on.

The second region, extending downstream from Ramadi on the Euphrates and Baghdad on the Tigris and including the Diyala River Valley, is the area where most irrigation projects have been carried out in the past. Pump irrigation predominates on the banks of the three rivers where the land is high and water is easily accessible. For the more remote areas flow irrigation is provided by canals dependent on the Hindiya barrage on the Euphrates, the Kut barrage on the Tigris and the Diyala weir on the Diyala River. Here flow irrigation between the two main rivers is facilitated by the fact that in the Baghdad region the Euphrates is higher than the Tigris, while below Baghdad the Tigris is above the Euphrates. In this region barley is the principal winter crop, followed by wheat. Summer crops are limited by lack of water, but among them cotton has become in recent years by far the most prominent, leaving sorghum, sesame, green gram, corn and millet far behind. Fruit culture is important. Dates are widely grown, both for domestic consumption and for export; and the Diyala Valley in particular produces excellent citrus fruit. Rice is an important crop between Nejf and Diwaniya on the Euphrates and around Rumaitha farther down the river. The country's major concentration of population lies in the region comprising the district about Baghdad and the provinces of Hilla, Kerbela and parts of Kut and Diwaniya. It includes the capital, Baghdad, a city with a population of 550,000 and the leading commercial and industrial center of the country.

The third region—the Basra, Nasiriya, Amara triangle—is generally one vast marsh during the spring floods. Here the rural dwellings are of reeds and brushwood, in contrast to the rest of the country where mud huts and, in the mountains of the North, stone houses predominate. Rice grown in the naturally inundated marshland is the staple food, varied by fish; and the water buffalo is the prevailing type of livestock. Here also is the world's largest date palm belt stretching along both sides of the Shatt al Arab and contributing one of Iraq's principal exports. Basra, Iraq's only port, is the largest city of this region and handles most of the country's foreign trade.

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

country's foreign trade. Near it is the country's second largest oil field.

To the south and southwest of the irrigation zone lie the vast arid tracts known as the southern and northern deserts which comprise about 40 percent of the land area of Iraq. These are sparsely inhabited by roaming nomads who raise camels, goats and sheep and annually take their flocks into the river valleys in search of summer pasture.

II. The People

The first official census of the settled population in Iraq was taken in 1947 and preliminary statistics on the male and female population of each province have already been published.[1] The preliminary estimate of the enumerated population was approximately 4.6 million. This figure has been brought up to 4.8 million in the published statistics by adding a rough estimate of 200,000 for the nomads in Mosul province and in the provinces along the Euphrates. Like all other countries at a similar stage of development, Iraq has a very young population, about half being under the age of 20. Although no reliable vital statistics are available, all indications point on the one hand to a very high rate of mortality among infants and young children, and on the other, to a correspondingly high birth rate. Even under the present poor health conditions the population seems to have been increasing at a rate conjectured to be in the region of one to one and a half percent per annum. Whatever the present rate, however, it is clear that, if full advantage is taken of the ample opportunity to improve health

[1] Considering the attendant difficulties, this census may be judged a success. The information about the people of Iraq which it has already yielded and, more especially, which it can yield when tabulation is completed, is without doubt far more reliable than any estimates previously made. However, as with most first attempts at census-taking, the results have to be interpreted with great caution. Besides the figures already published, the Mission had access to certain unpublished data on four provinces—Baghdad, Mosul, Kirkuk and Basra. Much of the description of the population which follows is based on this data, but it must be noted that, although allowance was made for the fact that these four provinces are a most imperfect cross-section of the country, this fact is an additional limitation to the validity of any but the broadest conclusions.

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

ANNEX B

FLOOD CONTROL, IRRIGATION AND DRAINAGE

Effective and economical utilization of available water resources is the central problem of Iraq.[1] In its study of this problem the Mission has addressed itself to (1) the storage of water for the purpose of controlling floods and increasing the regular supply of water for irrigation, (2) the expansion of irrigation, (3) the provision of drainage to prevent deterioration of irrigated lands by salt, and (4) questions of operation and maintenance of irrigation systems. The Mission has relied heavily on published materials ranging from the *Report on the Irrigation of Mesopotamia* by Sir William Willcocks, published in 1911, to more recent studies, particularly the monumental *Report on the Control of the Rivers of Iraq and the Utilization of their Waters* made in 1949 by the Irrigation Development Commission under the presidency of Mr. F. F. Haigh. In addition, however, the Mission conducted a field survey, in the course of which one or more of its members visited the sites of proposed dams and reservoirs, and examined the problems of irrigation at first hand. Its conclusions are therefore based on observation as well as the study of relevant documents.

I. Water Storage

Today the storage of the flood waters of the Euphrates and Tigris and their tributaries is the foremost problem. The twin rivers carry, on the average, almost 70 billion cubic meters of water per year—a quantity theoretically adequate to irrigate vast areas. Much of this comes, however, in the spring at a time too

[1] See the Mission's main report, p. 7 *et seq.*; also Annex A, *Basic Factors and Conditions.*

7: International Bank N. S-4 (1951) 1952 MH1 Iraq MH1

late to benefit winter crops and too early for summer crops. Destructive spring floods are apt to occur just before the harvesting of the winter crops begins and as the planting of summer crops is in process. In the dry season—July to December—which is critical for both summer and winter crops, the mean discharge of the Euphrates at Hit and the Tigris at Baghdad is only 421 cumecs (cubic meters per second) and 559 cumecs, respectively, as compared with 1,765 cumecs and 2,572 cumecs during the three peak months of the spring.[2] The Haigh Commission has calculated that the mean discharge which can be relied upon for irrigation is only 280 cumecs for the Euphrates and 350 cumecs for the Tigris and its tributaries. This supply would appear to be barely equal to the water needed for existing irrigation systems when figured on the basis of the standards usually applied in Iraq. In fact, at present there is an acute shortage of water in the irrigated areas of the Diyala Valley and the Hilla canal system while in other areas water is wasted. Short of radical economies in the use of water, which can only be realized over the long term, no significant extension of the irrigated area can be undertaken without controlling and regulating the flow of the rivers. Nor can disastrous floods be controlled without schemes for the storage of the excess waters.

The Euphrates

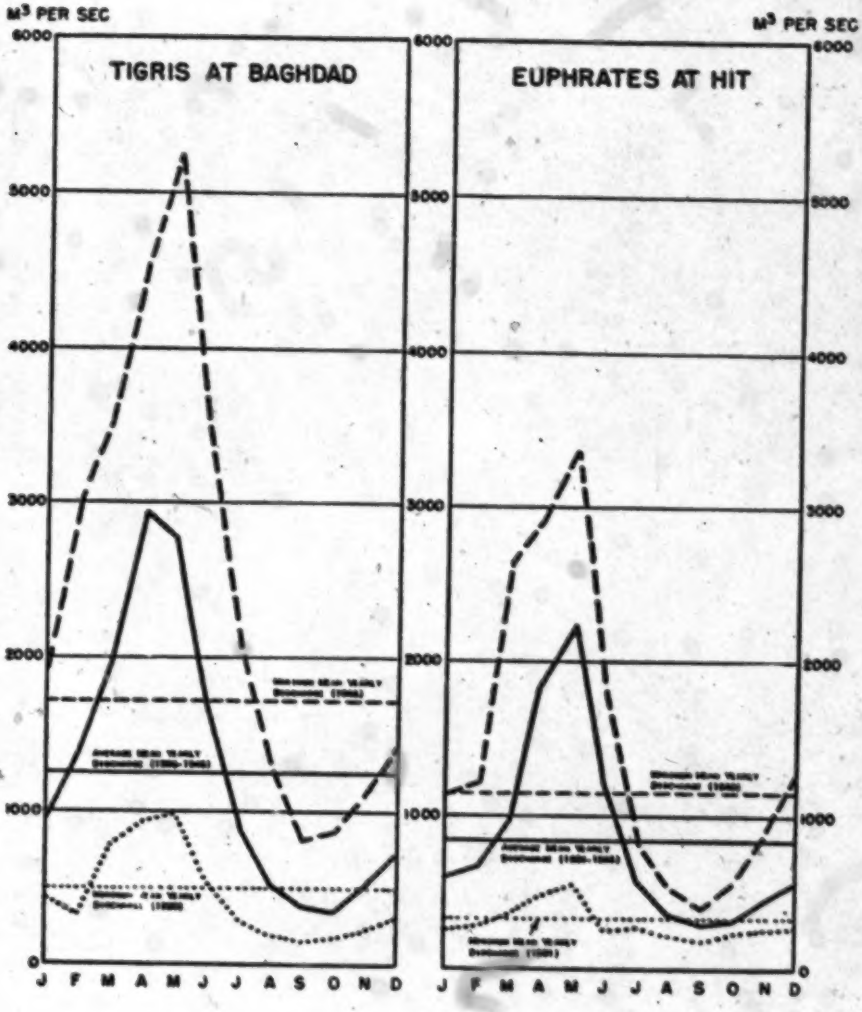
A project for the regulated diversion of the flood waters of the Euphrates into Lake Habbaniya is already under way. This project involves the construction of an inlet channel from the Euphrates near Ramadi to the lake as well as an outlet channel for the later release of the stored waters. A barrage will be built across the Euphrates at Warrar to raise the water level and thus permit an increase in the capacity of the lake reservoir. The outlet channel and regulator are already finished and work is well advanced on the inlet channel and its regulator. The project when completed will reduce the flood discharge from a possible maximum of 5,200 cumecs to 2,000 cumecs and will increase the minimum supply of water available for irrigation from 280 cumecs to perhaps 440 cumecs. The total cost is estimated at ID 4,300,000.

[2] See chart and also Tables I and II in the appendix.

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

HYDROGRAPHS OF THE TIGRIS AND EUPHRATES RIVERS 135 312

——— Average Mean Monthly Discharge
– – – – Minimum Mean Monthly Discharge
——— Maximum Mean Monthly Discharge



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APPENDIX

TABLE 1

Mean Monthly Discharges of the Euphrates and the Tigris

(in cubic meters per second)

Month	The Euphrates at Hit[1]			The Tigris at Baghdad[2]		
	Mean monthly discharge	Maximum monthly discharge	Minimum monthly discharge	Mean monthly discharge	Maximum monthly discharge	Minimum monthly discharge
January	592	1,130	258	947	1,926	432
February	665	1,217	278	1,388	3,020	323
March	968	2,651	344	1,992	3,496	797
April	1,853	2,917	462	2,951	4,541	935
May	2,235	3,358	533	2,775	5,241	997
June	1,208	1,792	249	1,684	3,562	548
July	577	809	268	897	2,069	292
August	358	533	202	504	1,278	192
September	293	383	183	373	827	163
October	311	557	225	359	872	175
November	432	881	247	516	1,105	212
December	558	1,248	264	709	1,413	300

[1] Based on observations over the years 1924-1946.
[2] Based on observations over the years 1906-1946.

7: International Bank N S-4 (1951) 1952 MH1 Iraq MH1

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TABLE III

SALINITY OF THE EUPHRATES AND THE TIGRIS[1]

(proportion of dissolved salts in parts per 100,000)

Month	Tigris At		Euphrates At		
	Baghdad	Hindiya	Hilla	Samawah	Ur Junction
January	26	9.5	16.7	19.7	20.0
February	26	7.2	16.9	22.6	23.5
March	22	10.7	20.5	21.1	20.7
April	19	7.4	18.0	13.9	20.0
May	19	5.8	18.5	10.3	10.0
June	19	8.3	10.8	10.9	8.0
July	23	9.1	10.2	16.5	14.0
August	28	22.1	22.5	69.0	70.9
September	30	20.7	26.6	90.7	97.6
October	32	26.8	27.0	69.8	82.2
November	33	17.5	19.1	53.3	57.2
December	27	17.1	21.4	57.2	74.4

[1] Data for the Tigris are based on observations over the period 1924 to 1932, but those for the Euphrates on observations over only one year which was particularly dry.

2; United Nations U-4 (no date) 1950 M1 Middle East
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OCTOBER-DECEMBER 1950

/31 /61 The territory of Iraq, which is shaped like an irregular triangle (see Map No. 1), covers an area of 435,223 square kilometres. At the time of the 1947 census, its population was 4,800,000 inhabitants, or 11 inhabitants per square kilometre.

/62 Over 75 per cent of the population of Iraq are Arabs. They live mainly in the centre and south of the country. The next most numerous inhabitants are the Kurds (over 15 per cent of the population), who live mainly in the north and especially in the region of Mosul. There are also some Persians, Armenians, Turks, Jews and others.

/33 The country, which is mountainous in the north and north-east, spreads out into the vast Mesopotamian plateau, which inclines gradually as it nears the Persian Gulf. This plateau, which was famous in ancient times for its network of irrigation channels, is now merely an arid steppe, and in some places even a desert.

Iraq is watered by the historic twin rivers, the Tigris and the Euphrates, which are the country's vital arteries. The Euphrates (Shatt el-Furat in Arabic) is approximately 3,000 kilometres long; its basin covers 673,000 square kilometres. The Tigris (Shatt el-Dijla), which is approximately 2,150 kilometres long, is joined by several tributaries, including the Shatt el-Gharraf, the Diyala, the Great Zab and the Little Zab. Its basin covers an area of 375,000 square kilometres. The Tigris and the Eu-

133 phrates join together in their lower courses to form the Shatt al-Arab, which is 185 kilometres long, navigable throughout its length, passes by the port of Basra, and flows into the Persian Gulf. In some places, this river is one kilometre wide. Baghdad is on the Tigris.

There are also several lakes in Iraq; the largest is Al-Hammar, with an area of 5,200 square kilometres.

132 The climate in the west of the country is Mediterranean and sub-tropical, with a long dry summer (lasting over seven months), frequent changes of temperature, with an average of 33.8° C.; in winter the average temperature is 9° to 10° C. In the east of the country, the average is the same in the summer, but the winter in the north-east is colder, with an average of 7° to 7.7° C. The rainfall varies from a yearly average of 38 to 40 centimetres in the highlands (probably twice as much in the mountains) to a maximum annual precipitation of 10 centimetres in the south-western desert region.

631 The country is divided administratively into the following fourteen provinces or "liwas": Baghdad, Mosul, Erbil, Kirkuk, Karbala, Hilla, Diwaniya, Kut, Amara, Basra, Diyala (chief town: Baquba), Dulaim (chief town: Ramadi), Muntafiq (chief town: Nasiriya), and Sulaimaniya.

3cRoyal Institute of International Affairs U-4 (no date)1954 M1 Middle East
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Chapter Five

IRAQ

The Land

131 The area of Iraq within its present frontiers is approximately 175,000 square miles. It is most conveniently divided into three distinct geographical sections: the Mesopotamian plain, the Uplands, and the Folded Mountain Belt. The first of these is historically the most important for it was the plain which nursed the great civilizations of the past, and its two great rivers which nourished them.

133 *The Plain.* To the north-east the southern alluvial plain follows the foothills of the Persian mountains up from the sea, turns south-east across the old river estuaries at Samarra and Hit, and returns parallel to and west of the Euphrates. Within these limits the soil is stoneless alluvium. The two rivers flow in channels somewhat above the rest of the plain, which is consequently liable to be flooded during the high-water period in the spring when the snows melt in Kurdistan; local rain has comparatively little effect on the rivers. The Tigris rises in late March or early April, the rise at Baghdad being sometimes as much as 23 feet; the Euphrates rises two or three weeks later than the Tigris, a maximum of about 14 feet (at Faluja); both rivers are at their lowest in September–October. At no point is the plain higher than 150 feet above sea-level.

132 The annual rainfall in the plain averages about 6 inches only; this rain occurs usually between mid-November and mid-March, the wettest month being February; but it is impossible to generalize, as a complete season's rainfall may occur in a space of three weeks, the remainder of the winter being dry. [241] Cultivation in the plain depends almost entirely on irrigation, the rainfall often being insufficient to mature a winter crop.

133 The rivers, which have frequently changed their courses throughout history, unite about sixty miles above the city of Basra in a single great channel, the Shatt al-Arab. Also above Basra is the marshland of the Muntafiq and Amara *liwas*, where a distinctive group of Arabs—the 'marsh Arabs'—live on fish and the produce of their mud-banks and swampy islands, or tend their buffaloes from shallow-draft canoes.

3:Royal Institute of International Affairs U-4 (no date)1954 M1 Middle East
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The Uplands. This region, which approximately corresponds to ancient Assyria, is undulating gravel steppe and rich ploughland, with some stone. Here, in an average year, the rainfall of 13 inches is sufficient to yield a winter crop without irrigation. In the districts of Kirkuk and Irbil, however, the rainfall is supplemented by the *kahriz* (underground water channels) system of water production, which is practised even more widely in Persia. Mosul, Irbil, and Kirkuk are respectively 703, 1,250, and 1,087 feet above sea-level. 133

Between the two rivers in this area and the south of lat. 36° N. is a wedge of uncultivable gypsum desert called al-Jezira (the Island).

The Mountain Belt. The crescent of mountain country included in the north-east frontier comprises the basins of the rivers Diala, Lesser Zab, Greater Zab, and Khabur. It is peopled by Kurds, a hardy mountain race, living an entirely different life from the Arabs of the plain and uplands. Villages are stone-built and shelved into the sides of the hills, with tall silver poplars and terraced cultivation, including vineyards and tobacco. Large areas of mountainside are covered with scrub oak; the summits provide summer pastures.

Between the Euphrates valley and the western frontiers is a large section of al-Badia, the Syrian Desert, populated only by nomad tribes of bedouin with their flocks and camels.

Climate. The climate of Iraq is extreme. In the plains the January mean temperature is 44–52°F.; in July, 86–96°F. In the mountains altitude decreases temperature in both seasons and increases the rainfall to as much as 40 inches. 132

The importance of Iraq's geographical situation has been obvious since Alexander's armies linked Europe with India twenty-two centuries ago. Through it ran not only the shortest but the easiest routes from southern Europe to the Persian Gulf and to India until the discovery of the Cape route. From the time of the Babylonian empire the trade of the Far East tended to pass through Iraq to the Levant ports on the Mediterranean. In the nineteenth century the desire to control or to prevent others controlling this route involved Great Britain, Russia, and Germany in attempts to dominate Iraq. The discovery of oil and the growth of air communications in the twentieth century have given the country a positive place in the political framework of the world and the former has provided the resources to transform it into a progressive modern nation. 131

The People

Population Statistics. The single official census that has been 161

5: Harrison D-4 (1912-1924) 1924 M1 Middle East
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CHAPTER VI

THE ARABS OF MESOPOTAMIA

MESOPOTAMIA does not belong to Arabia geographically. It lies to the north of the peninsula and includes the territory between the mountains of Asia Minor on the north, the mountains of Persia on the east, the Syrian desert on the west and the Persian Gulf on the south. The area enclosed between these limits is enormous. These are its natural boundaries, but politically the territory included takes in certain districts that belong to Persia and Turkey as well as the kingdom of Mesopotamia. It is of interest to include Mesopotamia in any discussion of Arab life, for although the Mesopotamians are not in Arabia geographically, nor even politically, racially they are Arabs as truly as the inhabitants of Nejd or the dwellers in the valleys of Oman. Practically all of the inhabitants of Mesopotamia are Arabic speaking and Arabic in origin, the chief exceptions being the numerous Jews who have come into the country from the north and the small community of Sabaeans, or fire-worshippers, who are a remnant of the people that the Arabs found inhabiting the country. The Arab is the dominant element, and the others together would probably not amount to five per cent of the whole.

The character of the country is most easily understood if we start by saying that Mesopotamia is the enormous

5: Harrison D-4 (1912-1924) 1924 M1 Middle East
Iraq MH1

133 delta of two rivers—the Euphrates and the Tigris. With insignificant exceptions, it is one vast level expanse made up of the rich silt that these rivers have brought down. It contains no physical features whatever that call for comment except the plains and the rivers, unless we mention that combination of plain and river which covers a considerable area, namely the marsh. In the past this district was the seat of some of the great empires of antiquity—Assyria and Babylonia and Persia. When Xenophon marched over it about 400 B. C., it was and had been for centuries one of the world's centers of power and productiveness. It supported a vast population in those days, how vast no one knows, but the ruins of ancient cities suggest that it must have been very great in-
312 deed. The basis of its greatness was the use of the Tigris and Euphrates rivers for irrigation. By this means the whole country had been transformed into one vast garden. The area was not so large then as it is now, for year by year the delta encroaches on the sea. It is supposed that in ancient times the sea reached up as far as Gurna at least, and that is a hundred miles from the present mouth of the river.

Under the Mohammedan caliphs of Baghdad the irrigation dams, waterways and smaller canals that had existed for centuries were allowed to fall into greater and greater decay. The Mongol invasion of Mesopotamia, which culminated in the capture of Baghdad in 1258 A. D., resulted in the complete destruction of this ancient system of irrigation. Ever since it has been in ruins, but the courses of the larger waterways are still distinguishable, and engineers tell us that they can decipher the en-
162 tire system. The country has been a desert since that
311 day, populated by nomad tribes who roam over the vast

1 [The Tigris-Euphrates Delta Area -- Analyst]

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CHAPTER III

COTTON IN IRAQ

Iraq today is on the verge of a great transformation—from a land of want to a land of plenty. Probably the greatest rehabilitation program that has ever been undertaken in any country is in progress to make the Garden of Eden bloom again.

For generations the lack of capital had been the greatest limitation to the country's progress. Now tremendous new sums created by oil royalties are being spent in building large-scale irrigation works, constructing roads, financing industries, and improving the health and education of the people.

Since the dissolution of the Ottoman Empire after the first World War, the people have manifested a strong and continuing interest in improving their country. A great deal was done by the British during the period of their mandate, especially in the field of transportation. Probably even more was done by King Faisal when the country became a sovereign constitutional monarchy after the end of the mandate in 1932. For instance, in the last two decades the number of schools increased about seven times. More important, the people, for the first time in recent history, showed real interest in general economic improvements. More capital probably was invested in industry in the past 25 years than for several preceding centuries.

The need and the opportunity are both apparent. On the one hand, the resources are abundant. Iraq is a fairly large country of some 175,000 square miles, the size of Mississippi, Louisiana, Arkansas, and Tennessee, about two-thirds of which are deserts and mountains unfit for intensive cultivation. Another 35,000 square miles, about 20 per cent of the land area, are in the Tigris-Euphrates lowlands, the largest alluvial area in the world, almost twice the size of the deltas of Arkansas, Mississippi, and Louisiana combined. Extensive highlands between the lowlands and the mountains are excellent for cultivation.

BACKGROUND

This great Mesopotamia, or "land between the rivers," was once one of the wealthiest regions of the world—the home of Adam and Eve, the Sumerian princes, Nebuchadnezzar, and the Arabian Nights, and the site of Babylon and Nineveh. This land has fostered at least three distinct civilizations through 5,000 years of history, and it cradled our present Western society.

These fertile soils are said by historians to have supported 15 to 20 million people in Biblical days. Now 5 million struggle to keep alive amidst

63 Simmons et al G-5 (1941-1951) 1954
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Iraq

GEOGRAPHY AND CLIMATE

Iraq is a constitutional monarchy which has been an independent sovereign state since the termination, in 1932, of the mandate awarded Great Britain by the League of Nations. Historically, it is identified with Mesopotamia, the "land between the rivers" and the home of one of the oldest civilizations known to man. Modern Iraq has an area of about 170,000 square miles, encompassing the valleys of the Tigris and the Euphrates rivers, a fringe of highlands in the north and an expanse of desert in the southwest. It extends from the Persian Gulf and Arabia in the south to Turkey in the north, and from Iran in the east to Syria and Jordan in the west. The country is conveniently divided into four geographic regions—the alluvial plains of the rivers, the mountain ranges backing the northern and the northeastern frontiers, the intervening uplands and the desert.

Rising in the mountains of eastern Anatolia, the Tigris River flows for 770 miles through Iraq, and in its northern course receives several tributaries, the most important in Iraqi territory being the Great Zab, the Little Zab and the Diyala. The Euphrates River also takes its source in Anatolia but meanders across central Syria and, subsequently, for 750 miles in Iraq before converging with the Tigris at Al Qurnah. The Shatt al Arab, formed by the union of the two rivers, flows for about 100 miles to the Persian Gulf, and for part of its length marks the boundary with Iran. The lower Euphrates and Tigris valleys form a great deltaic plain which reaches back from the Gulf to a zone north of Baghdad. It is

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63:Simmons et al G-5 (1941-1951) 1954
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Iraq

/33 interspersed by several large lakes and in the south by extensive stretches of marshland. In many areas the plain is lower than the rivers, and the riverain lands are flooded each spring when the waters are swollen by the rains and the melting snows from the mountains. The Tigris normally reaches flood level in March or April; the Euphrates, a few weeks later. Both rivers are [3127] tapped by networks of irrigation canals, while dams constructed at Hindiyah on the Euphrates and at Kut on the Tigris serve to divert the rivers into forked channels and increase the area under irrigation.

North of this alluvial plain, the country gives way to undulating uplands with an average elevation of about 1,000 feet. The river valleys are more sharply defined and sometimes confined within narrow gorges. The land between the rivers in this region is mainly steppe or gypsum desert and is known, as in Syria, as the Al Jazira. Toward the north and the northeast, the valleys of the Tigris and its tributaries are encircled by lofty mountain ranges, with peaks rising to from 10,000 to 15,000 feet, which form part of the Kurdish highlands, straddling the boundaries between Turkey, Iran and Iraq. The entire southwestern half of the country, from the Euphrates to the southern and the western frontiers, is gravel or sandy desert, a portion of the Great Syrian Desert.

/32 The climate of Iraq varies with the topography, but in general it is characterized by hot, dry summers and cold, damp winters. Most of the rainfall is concentrated in the months from November to April, with the maximum precipitation during January and February. It averages 4 to 6 inches a

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000 years. The infection is believed to be en-
164 zootic among the field rodents in sections
133 of the eastern and the southern provinces,
505 since outbreaks have sometimes coincided with floods which caused the rats to seek shelter in the villages. It has also been introduced on occasion by way of steamer traffic through Basra and the river towns.
164 With the exception of 34 cases, associated with a localized outbreak in the vicinity of Amarah in 1945, no instance of human plague was reported from 1937 through 1952. The 1945 outbreak started in a small village on the edge of the marshes near Amarah, in which 16 cases and 4 deaths were recorded within a period of 20 days.
164 Quarantine measures were enforced by the
744 government health organization and the Allied military authorities. DDT spraying was resisted by the inhabitants, who fled to the marshes, and the most seriously infected village was finally evacuated and burned to the ground.

In Baghdad and Basra, captured rats are often examined for the presence of plague, but rodent control is not attempted in the various cities and towns unless an epidemic is threatened. Plague-infected rats were found in Baghdad up to 1938.

164 **Relapsing Fever.** Both louse-borne and tick-borne relapsing fever are sporadic: from 25 to 100 cases are usually reported each year. Small localized outbreaks of louse-borne relapsing fever occur from time to time, primarily in the northern provinces. More extensive outbreaks were recorded in 1945-47, undoubtedly part of the epidemic wave which swept through the eastern Mediterranean countries in 1942-46. According to official statistics, 243 cases were treated in government institutions in 1945, 334 in 1946 and 379 in 1947, in contrast with 52 cases in 1944 and 26 to 33 in 1948-49.

Occasional cases of tick-borne relapsing fever are encountered in northern Iraq.
[134] *Ornithodorus tholozani* is regarded as the probable vector.

164 **Leishmaniasis.** Cutaneous leishmaniasis
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